

# THE CAMBRIDGE STATISTICS DISCUSSION GROUP

**Tuesday 20th October 2009 7:15 for 7:45**

Large Lecture Theatre,  
MRC Cognition and Brain Sciences Unit,  
Chaucer Road, Cambridge

## **Monte Carlo methods in General Insurance**

**Andrew McGuinness**  
EMB Consulting

**Abstract:** Andrew's aim is to firstly give an overview of the field of General Insurance and the wide range of areas in which statistics plays a role. He will explain the three fundamental questions that General Insurance actuaries are called to answer.

He will then focus on the area of financial modelling, and explain how this gives us the answer for the capital question, and goes beyond it. Andrew will focus on some specific examples, explain some key challenges that the purest statisticians would certainly struggle with and talk about how we go about solving these. He will also give you a demonstration of what a full 'internal model' run with a Monte Carlo simulation engine might look like.

Finally he would like to talk about some of the big current issues facing the industry, and some areas of research interest.

**Speaker:** Andrew McGuinness has a mathematics degree from the University of Cambridge, and qualified as an actuary in 2007. He joined EMB after graduating in 2002 and is based in the Cambridge office.

Andrew has a wide range of modelling experience and has implemented models for a number of enterprises, ranging from large Bermudian reinsurers to small Lloyd's syndicates; from vast multi-year models with quarterly projection, to single period models with intricate representations of catastrophe exposure and highly complex reinsurance programmes; and for a variety of purposes: including regulatory capital, long-term forecasting and business planning. He also has experience of economic scenario and asset modelling, and London market reserving. He has been heavily involved in the training and ongoing support EMB provides.

**Annual General Meeting:** Andrew's talk will be preceded by a brief Annual General Meeting.

**Directions** Chaucer Road is off Trumpington Road – if you are heading away from the city centre it is the first right after the junction with Brooklands Avenue. Number 15 is at the end on the left and is a large Victorian House with a more modern extension to its right. The entrance is in the porch located in the middle of the older section on the left as you come in and is accessed by ascending a few steps from the car park. Cars may be parked there. The outside door will be locked at 7:45.

Arrivals after 7:45pm can gain admittance by contacting the secretary on 07761769436. A map showing the location of the unit is at <http://www.mrc-cbu.cam.ac.uk/contacts/directions>.

### **Provisional Next Meetings:**

19th November – Anne Campbell (Cams & P'boro Mental Health Partnership NHS Trust and former MP for Cambridge).

2nd February – Bill Janeway (Warburg Pincus & Cambridge University).

2nd March – Tony Sabin (Amgen).

March – Doug Easton (CRUK Genetic Epidemiology Unit).

**Supper:** Some members eat before a talk at the University Centre meeting in the downstairs bar at **5-45pm**. All welcome !

**Secretary:** Peter Watson, MRC Cognition and Brain Sciences Unit, 15 Chaucer Road, Cambridge CB2 7EF; telephone 01223 355294 Extension 801; E-mail [peter.watson@mrc-cbu.cam.ac.uk](mailto:peter.watson@mrc-cbu.cam.ac.uk)

**For security purposes could you please let Peter Watson know if you intend attending the talk.**

**Take a look at our website: <http://www.mrc-cbu.cam.ac.uk/people/peter.watson/csdg.html>**

**TURN OVER for the Annual General Meeting agenda**

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## **Annual General Meeting**

The annual general meeting will be followed immediately by Andrew McGuinness's talk 'Monte Carlo methods in General Insurance '.

### **Agenda:**

0. Approval of Minutes of previous A.G.M.  
(<http://imaging.mrc-cbu.cam.ac.uk/statswiki/csdg/newtalks>)
1. Treasurer's Report.
2. Secretary's Report.
3. Election of Chairman, Secretary, Treasurer, plus 3 other members of the Committee.
4. Any Other Business.

### **Rules for Election:**

1. FRANCISE: All paid-up members may vote or stand for office.
2. NOMINATIONS: The offices to be filled are Chairman, Secretary and Treasurer and three other members of the Committee.

An outgoing Chairman will be a member of the Committee ex officio. At the end of each year the entire Committee will stand down, but may stand again for the same office as they are leaving without nomination. To be elected to a different office a candidate must be nominated by one person from the paid-up membership, not including himself. Nominations do not require a seconder to be valid, but do require the consent of the nominee. One person can be nominated for more than one office, but hold only one. If a person is elected to a higher office (according to the ordering given below) he or she automatically ceases to be a candidate for a lower office. A candidate for the post of Chairman, Secretary, Treasurer is automatically a candidate for the Committee if he or she fails to gain election to one of these three posts.

**TURN OVER for directions to the Cognition and Brain Sciences Unit and abstract of Andrew's talk**